

REMARKS

Claims 1-4 are pending in this application. By this amendment, Applicants amend claims 3 and 4.

Claims 3 and 4 were rejected under 35 U.S.C. § 112, second paragraph for allegedly being indefinite. Applicants have amended claims 3 and 4 to correct the informalities noted by the Examiner. Particularly, Applicants have amended claim 3 to be dependent upon only claim 2 which provides proper antecedent basis for "the Coriolis force" recited in claims 3 and 4. Furthermore, Applicants have amended claim 3 to change the term "the angular velocity" to --an angular velocity-- to correct the alleged antecedent basis problem. And the term "said Coriolis force direction vibrating detection unit" has been changed to --said Coriolis force direction vibrating detecting unit-- which has antecedent basis in claim 2. Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 1-4 were rejected under 35 U.S.C. § 102(e) as being anticipated by Negoro et al. (U.S. 6,240,780). And claims 1-4 were further rejected under 35 U.S.C. § 102(e) as being anticipated by Touge et al. (U.S. 6,134,961). Applicants respectfully traverse this rejection.

Claim 1 recites:

"A vibrator comprising:
a vibrating body;
a driving unit for causing said vibrating body to vibrate in a predetermined vibrating direction; and
a driving monitoring unit provided in a barycentric region of said vibrating body for detecting vibration displacement in a driving direction of said vibrating body" (Emphasis added)

The Examiner alleged that Negoro et al. teaches all of the features recited in claim 1, including "a driving monitoring unit 21". Applicants respectfully disagree.

In contrast to the present claimed invention and the Examiner's allegation, Negoro et al. discloses that due to the Coriolis force "the second vibrator 8 is vibrated in the direction of the Y axis, and the change of vibration of the second vibrator 8 is detected by each of the displacement detecting portions 21" in order to measure the

angular velocity around the Z axis (see col. 7, lines 40-46 and col. 3, lines 1-7). Thus, displacement detecting portions 21 do **NOT** detect "vibration displacement in **a driving direction** of said vibrating body" as recited in claim 1 of the present application.

In addition, Negoro et al. fails to teach or suggest placing the displacement detecting portions 21 "in a barycentric region of said vibrating body" as recited in the present claimed invention. The fact that the displacement detecting portions 21 are located somewhere in the vicinity of the geometric center of the vibrating body does **NOT** necessarily mean that the displacement detecting portions 21 of Negoro et al. are positioned in the barycenter of the vibrating body. In contrast, Figs. 12A, 17A, 12B and 17B of Negoro et al. clearly show that the displacement detecting portions 21 branch out from the geometric center of the vibrating body of the device, which clearly establishes that the displacement detecting portions 21 could not be in the barycentric region of the vibrating body as alleged by the Examiner.

Regarding the rejection of claims 1-4 over Touge et al., the Examiner alleged that Touge et al. teaches all of the features recited in claim 1, and further that Negoro et al. teaches the features recited in claims 2-4. Thus, it is respectfully submitted that the grounds for rejecting claims 2-4 should have been asserted under 35 U.S.C. § 103(a), rather than under 35 U.S.C. § 102(e) since those grounds require the use of Touge et al. **and** Negoro et al. Accordingly, it is respectfully submitted that the rejection of claims 2-4 over the combination of Touge et al. and Negoro et al. is improper pursuant to 35 U.S.C. § 103(c).

Negoro et al. is a proper reference, if at all, only under 35 U.S.C. § 102(e) as it was issued after the U.S. filing date of the present application. Negoro et al. and the present application, were, at the time the invention was made, owned by the same company or subject to an obligation of assignment to the same company, namely Murata Manufacturing Co., Ltd. Pursuant to 35 U.S.C. § 103(c), therefore, Negoro et al. cannot be cited against any claims of the present application under 35 U.S.C. § 103(c). Therefore, Applicants submit herewith a Declaration under 37 C.F.R. § 1.130 in order to disqualify Negoro et al. as a reference under 35 U.S.C. § 103(c). Accordingly,

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 2-4 over Touge et al. in view of Negoro et al.

Regarding the rejection of claim 1 over Touge et al., the Examiner alleged that Touge et al. teaches a vibrating body, a driving unit 5, 6 for causing the vibrating body to vibrate, and a driving monitoring unit 15, 16 provided in a barycentric region of the vibrating body. However, no portion of the device taught by Touge et al. has been specifically identified as a vibrating body.

In contrast to the present claimed invention and the Examiner's allegations, Touge et al. teaches that the vibrating body associated with the driving monitoring unit 15, 16 is the second vibration system "consisting of drive frame 17 and the vibrator 21" (see col. 7, lines 56-57). The driving monitoring unit 15, 16 monitors the vibration of the second system, as clearly set forth in col. 7, lines 61-64 of Touge et al. The driving monitoring unit 15, 16 is clearly disposed outside the geometric parameters of the second vibration system as shown in the figures, and thus, is **NOT** located in the barycentric region of the vibrating body as recited in claim 1 of the present application.

Accordingly, Applicants respectfully submit that Negoro et al. and Touge et al., taken individually or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claim 1 of the present application.

In view of the foregoing remarks, Applicants respectfully submit that claim 1 is allowable. Claims 2-4 depend upon claim 1, and are therefore allowable for at least the reasons that claim 1 is allowable.

In view of the foregoing Amendment and Remarks, Applicants respectfully submit that this application is in condition for allowance. Favorable consideration and prompt allowance are respectfully solicited.

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The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

3. A vibrator according to [claim 1 or] claim 2, wherein said vibrating body has a double-frame construction obtained by connecting an inner frame to the inside of an outer frame via a coupling beam so that said vibrating body can flexibly vibrate in the Coriolis force direction, and said driving unit causes said outer frame and said inner frame to vibrate in an integral manner in the driving direction, said inner frame being constructed and arranged so as to be vibrated in the Coriolis force direction with respect to said outer frame due to the Coriolis force caused by [the] an angular velocity, and said driving monitoring unit being provided in the barycentric region of said vibrating body disposed inside said inner frame while being supported by said inner frame.

4. A vibrator according to claim 3, in which said Coriolis force is caused by an angular velocity of rotation around an axis having a direction perpendicular to both said driving direction and said Coriolis direction and further comprising a circuit responsive to said Coriolis force direction vibrating detecting [detection] unit for determining said angular velocity of rotation.